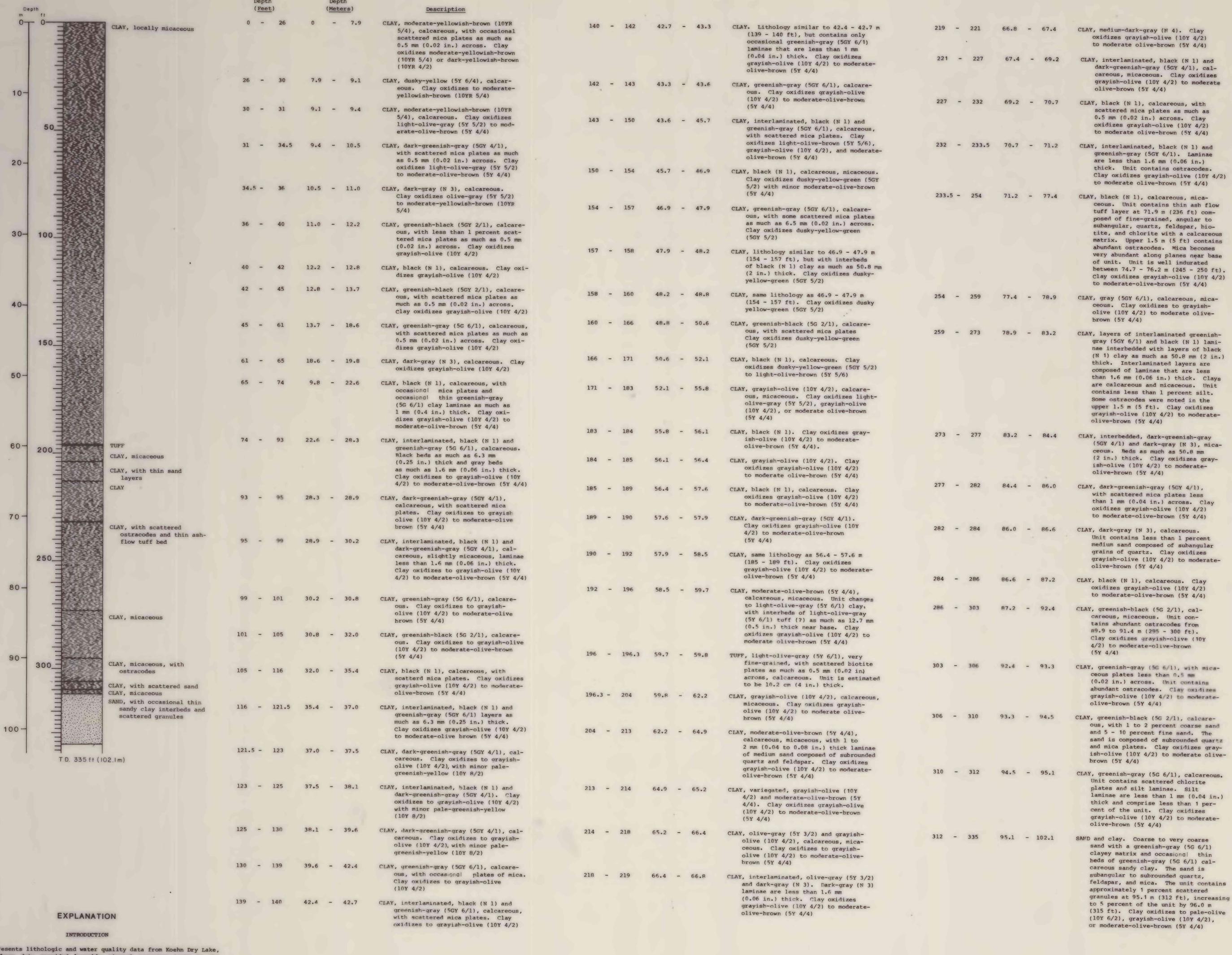
Kern County, California

LITHOLOGIC LOGS FROM KOEHN DRY LAKE TEST WELL NO. 3



This report presents lithologic and water quality data from Koehn Dry Lake, California. These data provided leasable mineral resource input to the Bureau of Land Management's comprehensive long-range plan for the management, use, development, and protection of public lands within the California Desert Conservation Area (index map). This plan was authorized by the Federal Land Policy and Management Act of October 21, 1976 (Public Law 94-579).

DRILLING AND LITHOLOGIC LOGGING TECHNIQUES

The test well was completed in December 1978 using the reverse circulation drilling technique. During drilling, either air or water or both, were pumped between the outer and inner walls of the dual-wall drill pipe to an open-face insert bit. The drilling fluids and cuttings were then forced up the inner opening of the drill pipe to the surface. This technique allows recovery of uncontaminated sediment and water samples. In situ ground water was used as a drilling fluid as much as possible; when this was not possible a fine mist of imported fresh water and air was used.

Lithologic characteristics of the sampled drill cuttings were described in the field. Field descriptions were later supplemented during laboratory examination. The rock color chart (Goddard and others, 1948) was used to describe sample color. All color classifications were made on damp to wet cuttings. Sediment names were described using the classification scheme of Wentworth (1922). The term "clay" is used only in the sense of particle size (less than 4 microns) and does not infer mineralogical content. Percentages of lithologic constituents listed in the description are approximate.

WATER QUALITY

A water sample was collected from a sand layer at 315 feet. The water sample was collected after drilling fluids and foreign matter were pumped from the hole. Water temperature and pH of raw untreated samples and specific gravity of filtered samples were measured in the field.

ACKNOWLEDGEMENTS

G. Thomas Server provided oxidation color descriptions.

REFERENCES

Goddard, E. N., chm., and others, 1948, Rock-color chart: National Research Council; reprinted by Geological Society of America, 1951, 1963, 1970, 6 p.

Wentworth, C. K., 1922, A scale of grade and class terms for clastic sediments: Journal of Geology, v. 30, p. 377-392.

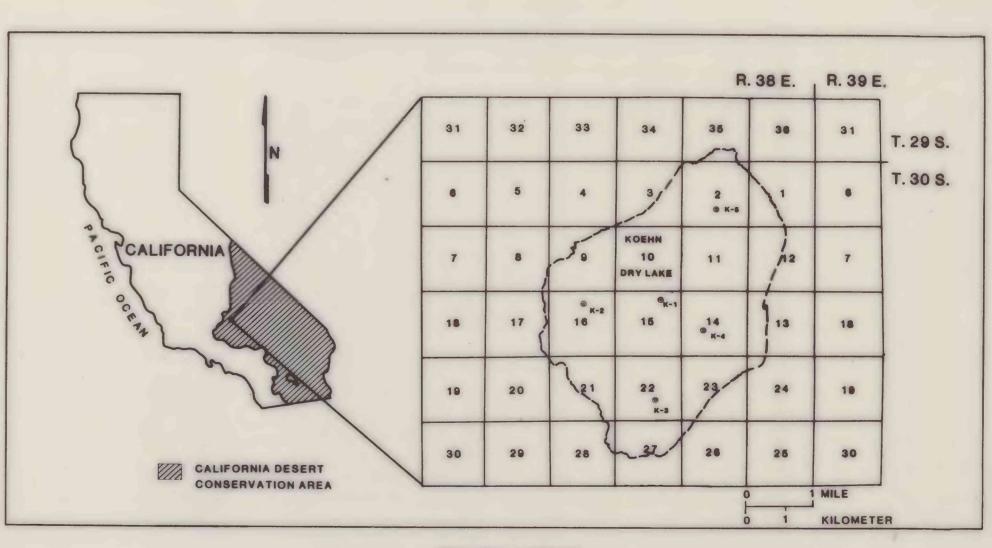
WATER QUALITY DATA FROM KOEHN DRY LAKE TEST WELL NO. 3

Sample number	Date of collecti	wate	epth of er sample n(ft)	Water temperatur (°C)	relab	field	- Specific gravity			SAR* (sodium- adsorption ratio)
K-3-1	12/12/7	96.	0 (315)	27.2	8.9	7.0	1.002	2,910	99	90
						mg/1				
Sample number	Silica (Si0 ₂)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Phosphorus (P)	Sulphate (SO ₄)	Chloride Fluor (Cl) (F)	The second secon	
K-3-1	9.0	2.4	0.4	570	. 5.2	0.12	41	500 14	0.01	0.05
							mg/1			
	Managanaga	Troom	Power	Lithium	Shwambi am		Solids, residue or evaporation	Calcium		-2.
Sample number	Manganese (Mn)	(Fe)		(Li)	Strontium (Sr)	Uranium (U)	at 180°C (TDS)	(CaCO ₃)	Bicarbonate# (HCO ₃)	Total hardness
K-3-1	0	70	2,800	30	90	9.1	1,430	430	525	8

Sodium-adsorption-ratio -- predicts degree to which irrigation water tends to enter into cation exchange reactions in soil. High values imply hazard of sodium replacing adsorbed calcium and magnesium, this replacement is damaging to soil structure.

Calculated

INDEX MAP



TEST WELL LOCATION

Latitude: 35° 18' 22" N.
Longitude: 117° 53' 19" W.
SW1/4 NW1/4 SE1/4 sec. 22, T. 30 S., R. 38 E.
Mount Diablo Meridian

PRELIMINARY

This report has not been edited for conformity with Geological Survey editorial standards

LITHOLOGIC AND WATER QUALITY DATA FROM TEST WELLS ON KOEHN DRY LAKE, KERN COUNTY, CALIFORNIA

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